

# Notice of Allowability

Application No.

10/050,199

Examiner

Ling-Siu Choi

Applicant(s)

GRAY ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to September 13, 2004.
2. ☒ The allowed claim(s) is/are 10.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is in response to the Response to Office filed September 13, 2004. Claims 1-15 are now pending.

#### ***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Mr. Stephen E. Johnson on October 25, 2004.

3. The application has been amended as follows:  
**Cancel** claims 1-9 and 11-15 without prejudice.

#### ***Allowable Subject Matter***

4. Claim 10 is allowed.
5. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Nienhaus et al.  
(US 5,670,600) in view of Nothnagel (EP 0 523 993 A1).

The present invention relates to an aqueous coating composition comprising (1)  
a first polymer comprising

(1) a first polymer	(a) <b>16-25 wt% of a monoethylenically unsaturated monomer containing one or more acidic functional groups</b> [carboxylic, sulfonic, or phosphoric groups]
	(b) 0-60 wt% of a (meth)acrylic monomer containing one or more pendant reactive functional groups [hydroxy, thiol, or amino groups]
	(c) 0-70 wt% of one or more vinylaromatic monomers
	(d) 15-90 wt% of one or more C <sub>1-20</sub> alkyl (meth)acrylate ester monomers
	(e) 0-10 wt% of one or more other copolymerizable monomers
(2) a polyfunctional crosslinker agent comprising pendant functional groups [isocyanate, carbodiimide, aziridiny, or epoxy groups]	
(3) 0.1-15 wt% of coalescing agent	
(4) 0-10 wt% of one ore more additives [waxes, surfactants, defoamers, leveling agents, alkali-soluble resins, or plasticizers]	
(5) 50-99 wt% of water	
wherein the first polymer has M <sub>n</sub> from greater than 50,000 up to 2,000,000	
the polyfunctional crosslinker agent has from 0.2 to 5 equivalents of pendent functional group per equivalent of corresponding pedant reactive functional group in the first polymer	
the combined amount of (1) and (2) is from 10-90 % and the sum of (1), (2), (3), (4), and (5) add up to 100%	

(summary of claim 10)

Nienhaus et al. disclose a aqueous two component polyurethane coating comprising (A) a water-dilutable polyacrylate resin containing (a1) 20-60 wt% of one or more esters selected from the group consisting of esters of acrylic acid, esters of methacrylic acid, and mixtures thereof, (a2) 10-40 wt% of one or more ethylenically unsaturated monomer, (a3) 1-25 wt% one or more vinyl esters of  $\alpha$ -branched monocarboxylic acid, (a4) 1-25 wt% at least one reaction product of acrylic acid and/or methacrylic acid with the glycidyl ester of an  $\alpha$ -branched monocarboxylic acid, (a5) **1-15 wt% of one or more ethylenically unsaturated monomer having at least one carboxylic group per molecule**, and (a6) 5-30 wt% an ethylenically unsaturated monomer and (B) a polyisocyanate component as a crosslinking agent, wherein the acrylic, wherein the polyacrylate resin has a number average molecular weight of from 2,500 to 20,000 (col. 8, lines 45-47; claims 1 and 5). Nienhaus et al. further disclose that the coating composition further comprises a thickening agent, a wetting agent, an antifoam (col. 11, lines 15-32). However, Nienhaus et al. do not teach or fairly suggest an aqueous coating composition comprising **16-25 wt% of ethylenically unsaturated monomer having at least one carboxylic group per molecule**.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons

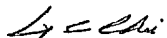
for Allowance."

### **Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098. The examiner can normally be reached on Monday to Friday.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**LING-SUI CHOI**  
**PRIMARY EXAMINER**

Ling-Siu Choi

October 25, 2004